



Presented by
Jeff Jeannette, AIA

january 14 | 2019



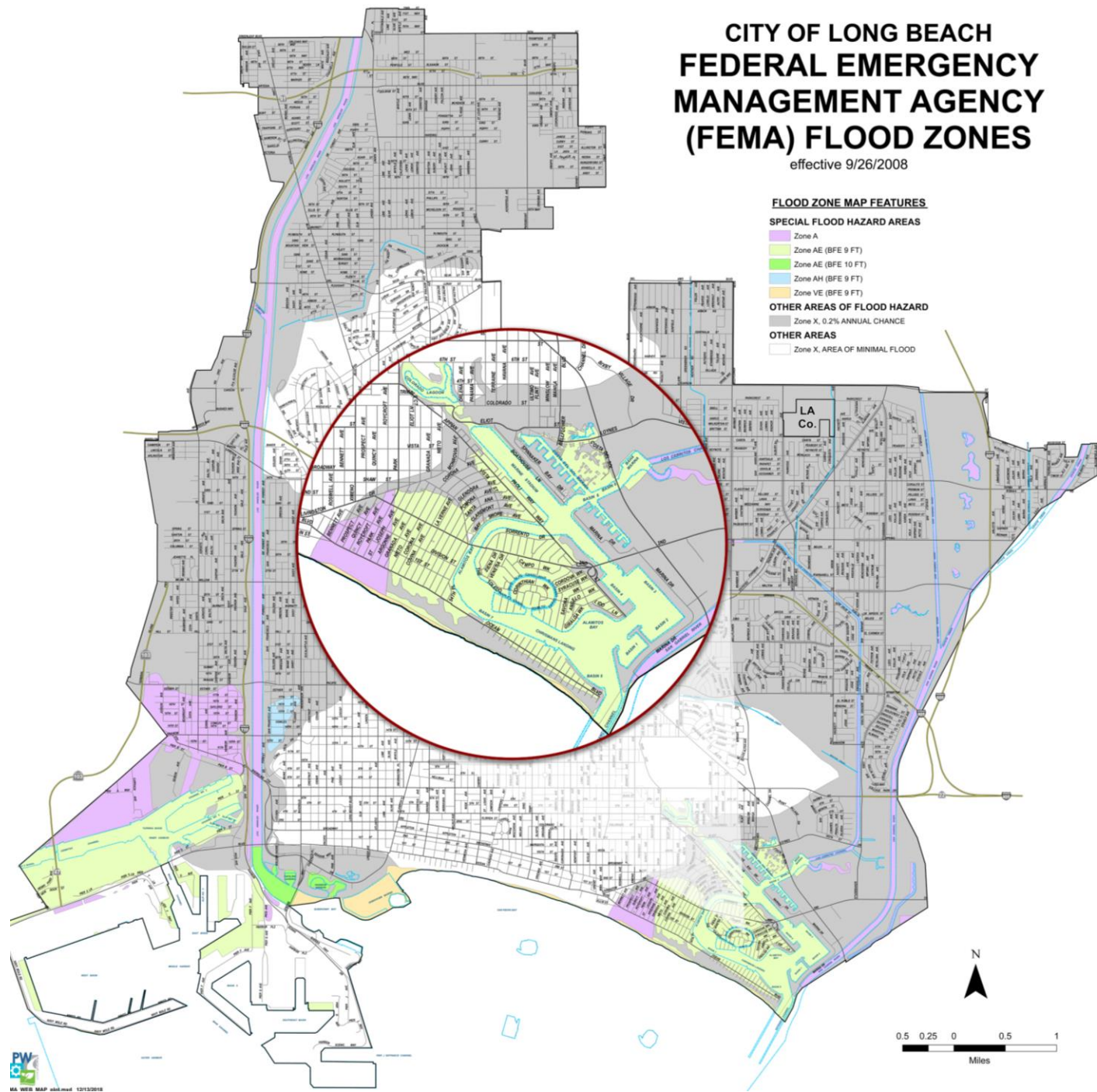
Preparing your home for Sea Level Rise in the floodplains of Long Beach



Preparing for Sea Level Rise

Areas of focus

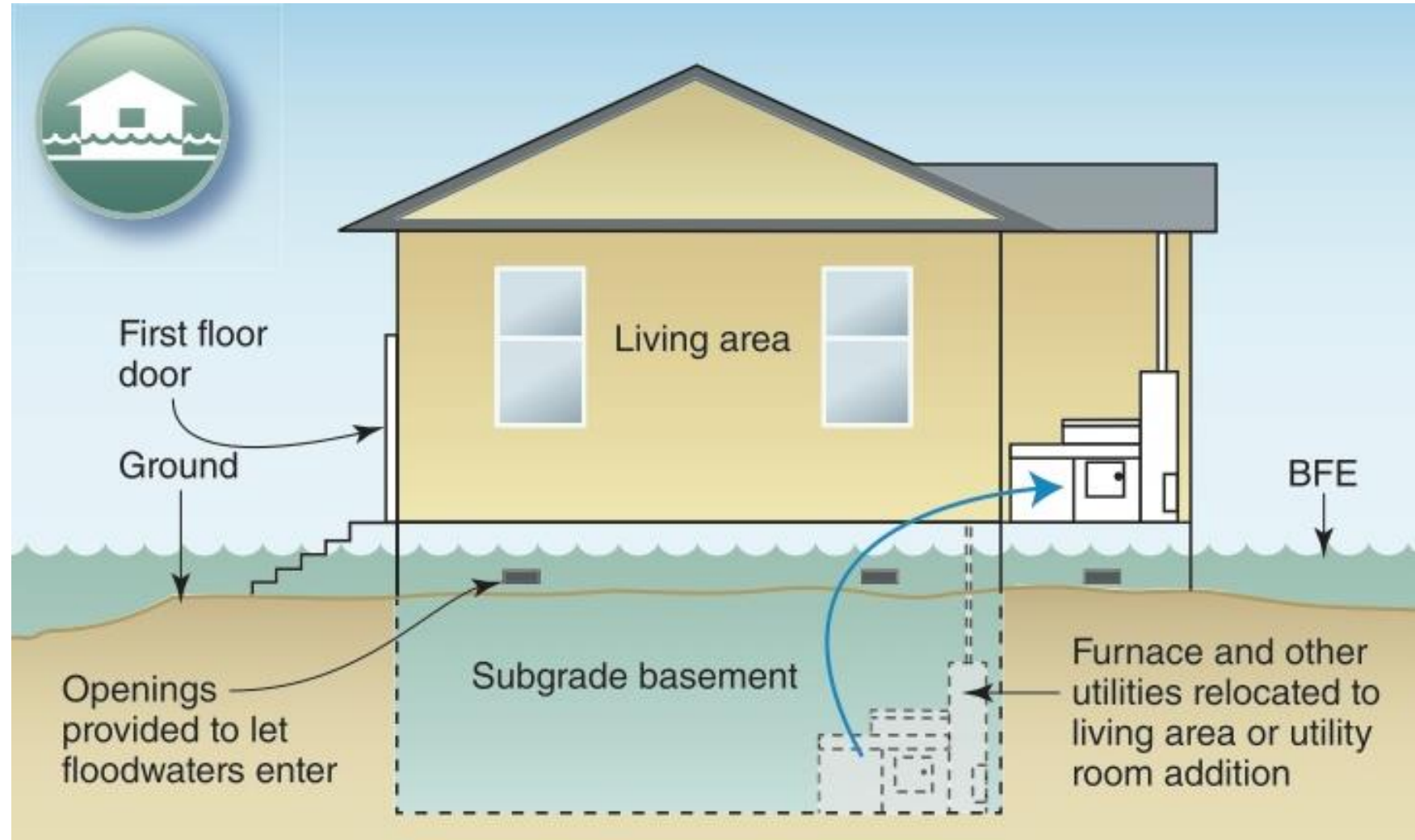
Belmont Shore
Belmont Park
Naples
Peninsula



Preparing for Sea Level Rise

Base Flood Elevation
aka. "BFE"

9' per FEMA
+1' per Long Beach
10' min. floor elevation



Preparing for Sea Level Rise

Homes at Risk

a visual inspection



Floor levels near the
elevation of sidewalks
are likely below the
Base Flood Elevation



Preparing for Sea Level Rise

First...

Secure an Elevation
Certificate to find out if
your floor is above the
Base Flood Elevation

U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expires March 31, 2012

Important: Read the instructions on pages 1-9.

SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name

For Insurance Company Use:

Policy Number

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.

Company NAIC Number

City LONG BEACH

State CA

ZIP Code 90803

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) RESIDENTIAL

A5. Latitude/Longitude: Lat. N33°45'23.9" Long. W118°07'58.4" Horizontal Datum: ☐ NAD 1927 ☒ NAD 1983

A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.

A7. Building Diagram Number 8

A8. For a building with a crawlspace or enclosure(s):

A9. For a building with an attached garage:

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY)

C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under Construction
*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations - Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1- below according to the building diagram specified in Item A7. Use the same datum as the BFE.

Benchmark Utilized LONG BEACH BENCHMARK # 1405 Vertical Datum NGVD

Conversion/Comments NGVD 1929 +2.55' = NAVD 1988 PER VERTCON - VAL

		Check the
a)	Top of bottom floor (including basement, crawlspace, or enclosure floor)	<u>8.5</u> <input checked="" type="checkbox"/> feet
b)	Top of the next higher floor	<u>10.7</u> <input checked="" type="checkbox"/> feet
c)	Bottom of the lowest horizontal structural member (V Zones only)	<u>N/A</u> <input type="checkbox"/> feet
d)	Attached garage (top of slab)	<u>N/A</u> <input type="checkbox"/> feet
e)	Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	<u>4.5</u> <input checked="" type="checkbox"/> feet
f)	Lowest adjacent (finished) grade next to building (LAG)	<u>8.5</u> <input checked="" type="checkbox"/> feet
g)	Highest adjacent (finished) grade next to building (HAG)	<u>9.2</u> <input checked="" type="checkbox"/> feet
h)	Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	<u>8.7</u> <input checked="" type="checkbox"/> feet

Preparing for Sea Level Rise

Flood Protection

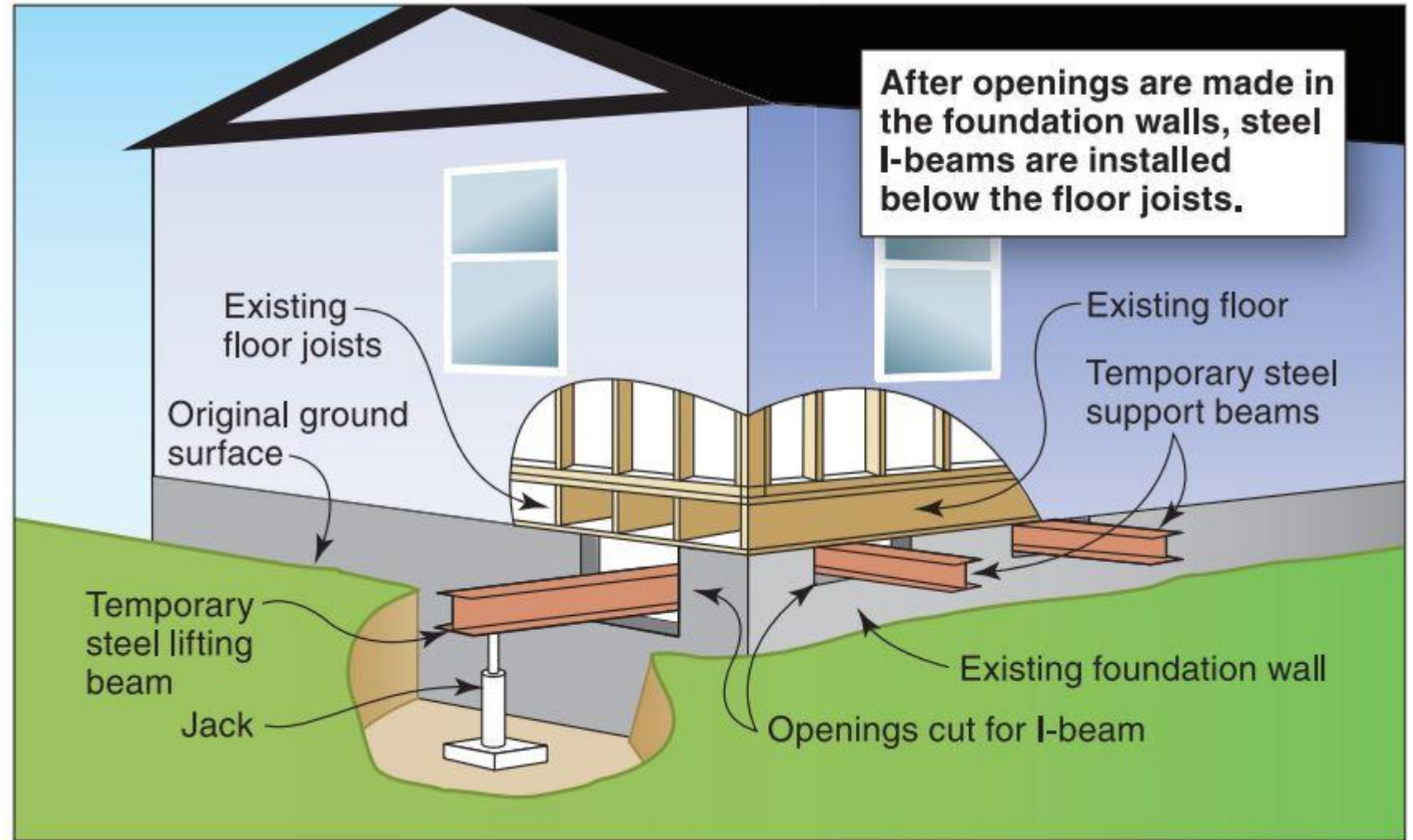
Dirt Berms
Concrete Piles



Preparing for Sea Level Rise

Measures to
protect your home...

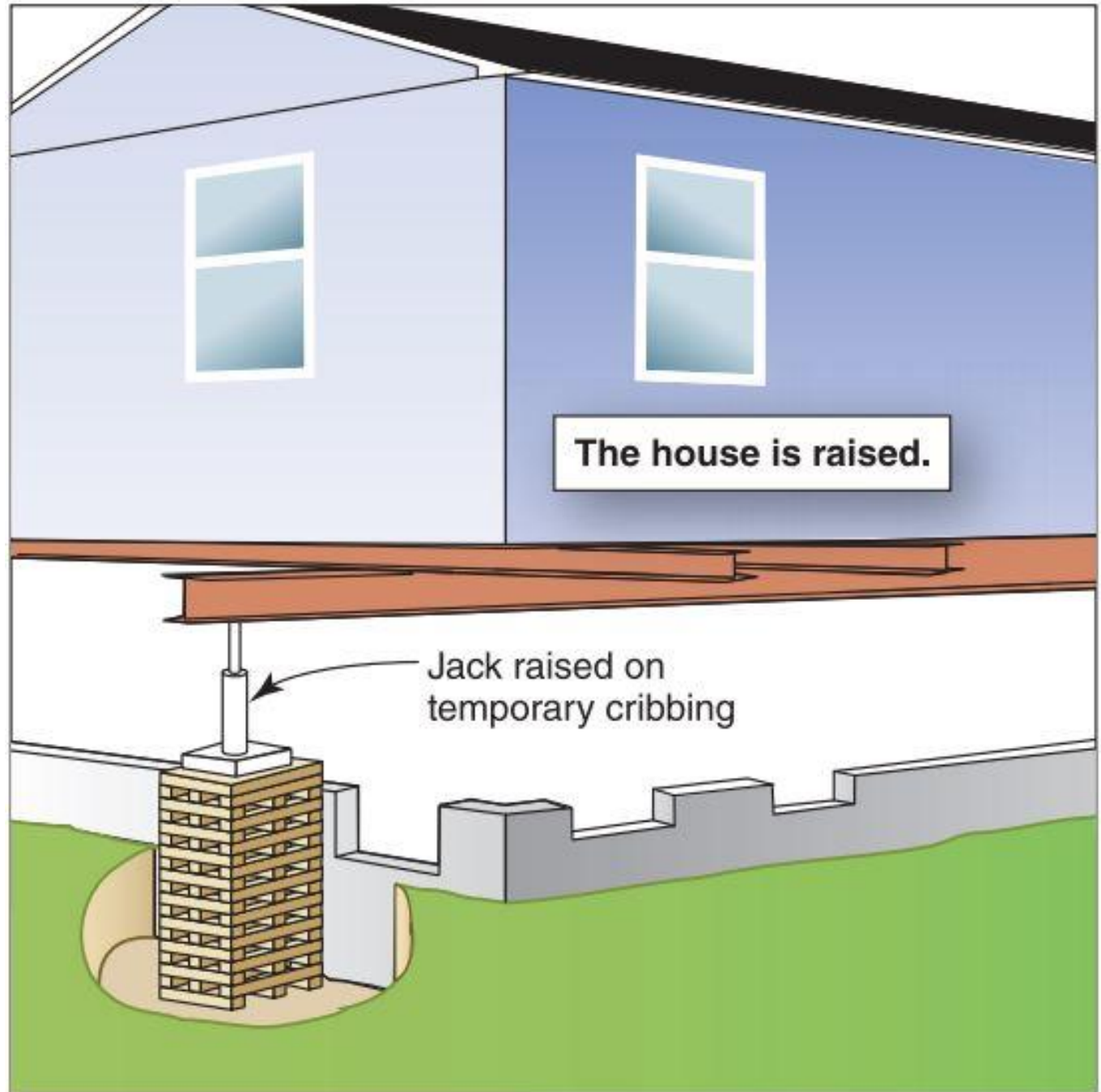
Raise your home above
elevation 10'



Preparing for Sea Level Rise

Measures to
protect your home...

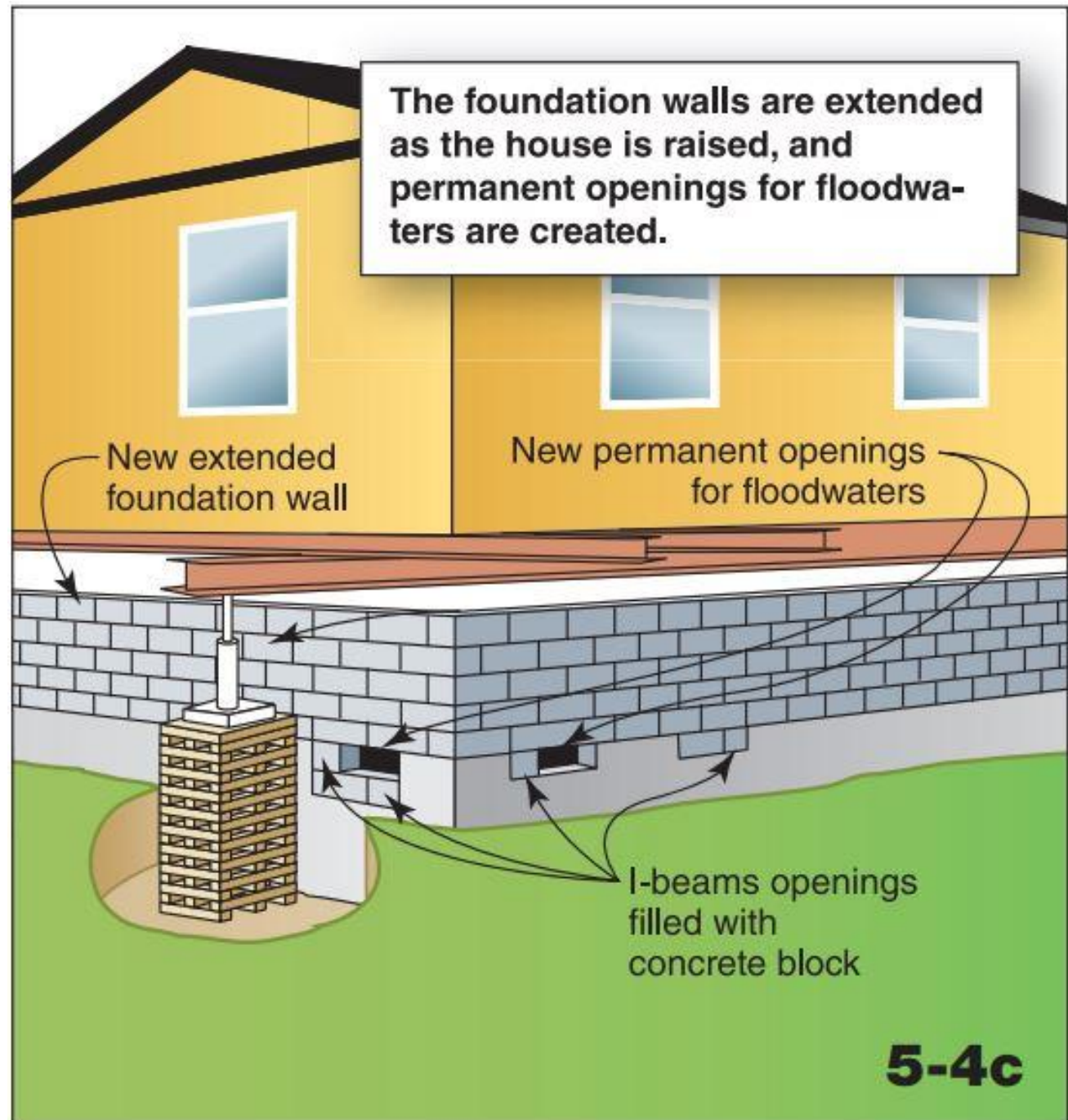
Raise your home above
elevation 10'



Preparing for Sea Level Rise

Measures to
protect your home...

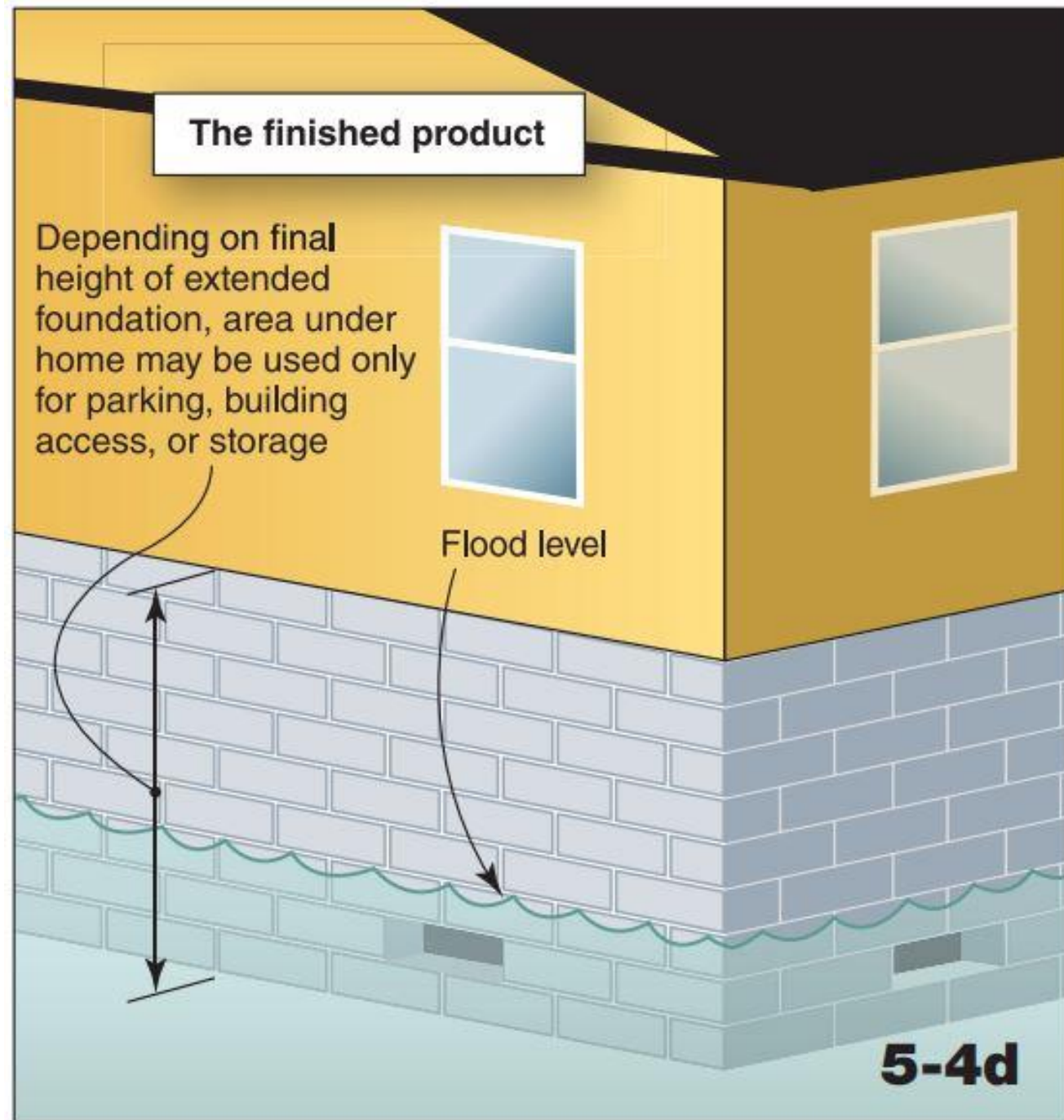
Raise your home above
elevation 10'



Preparing for Sea Level Rise

Measures to
protect your home...

Raise your home above
elevation 10'



Preparing for Sea Level Rise

Measures to
protect your home...

Install Flood Vents

Let water to pass through
under floor areas

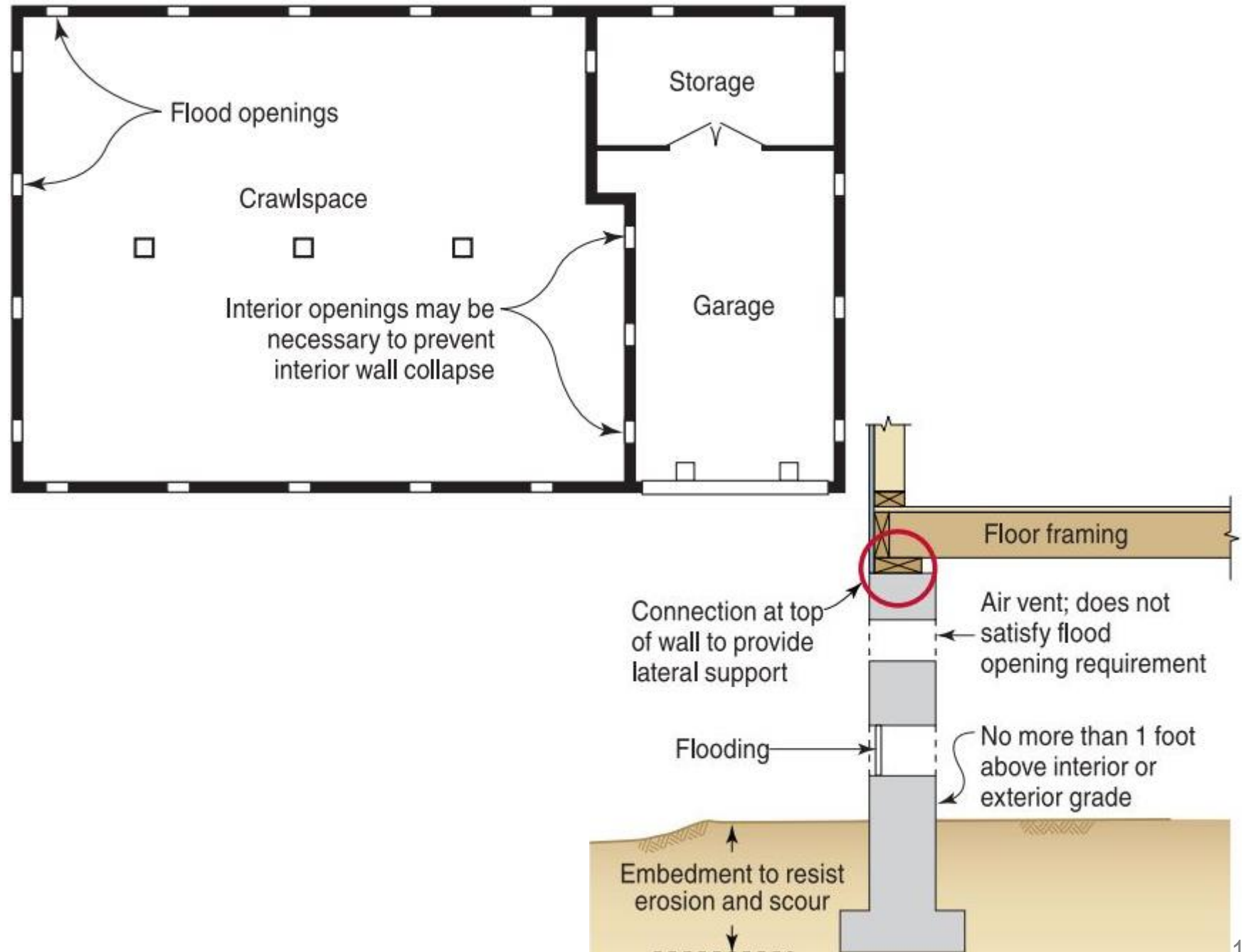


Preparing for Sea Level Rise

Measures to
protect your home...

Install Flood Vents

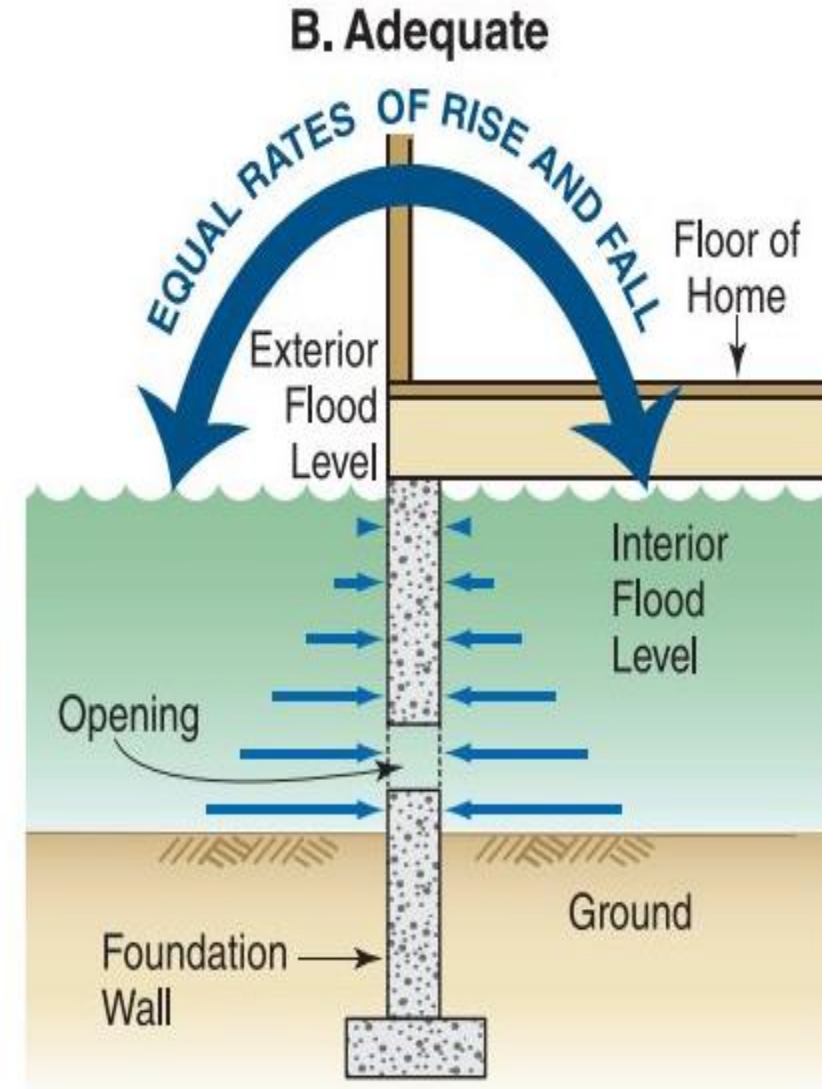
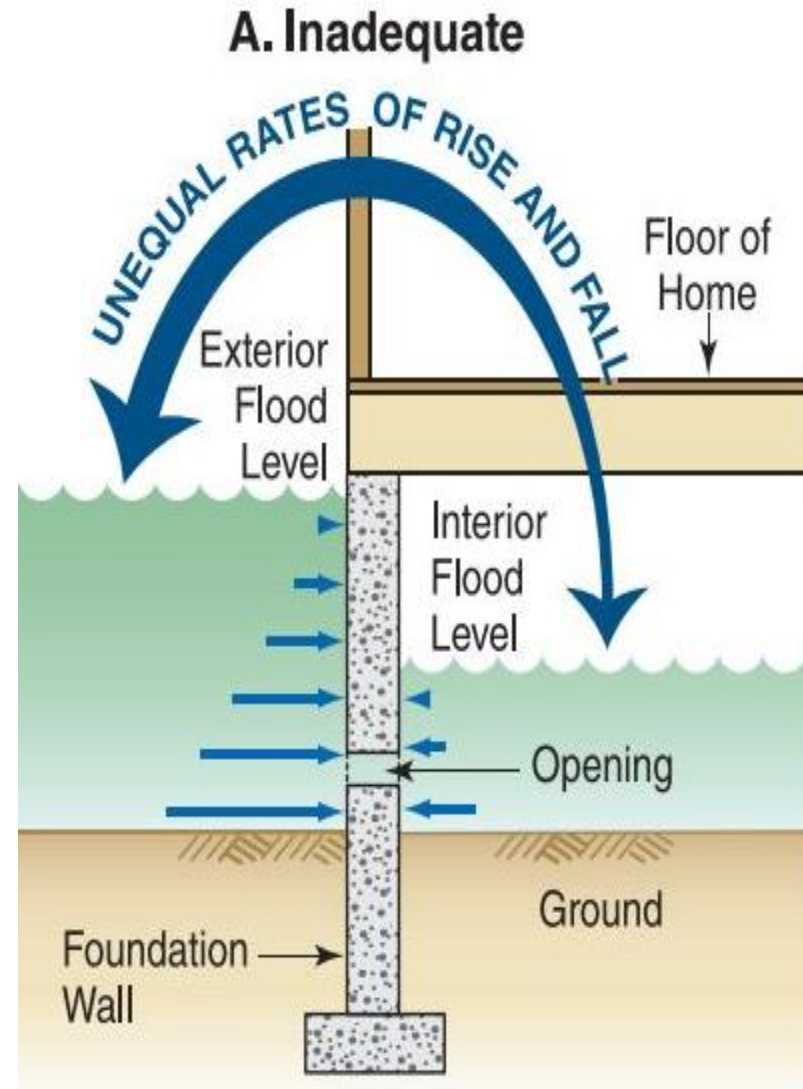
Let water to pass through
under floor areas



Preparing for Sea Level Rise

Measures to
protect your home...

Flood Vents equalize
hydrostatic pressures
and reduces damage to
your home



Preparing for Sea Level Rise

Measures to
protect your home...

Spray water sealer on
wood members to
protect them from water

Use non-organic building
materials

jeannette
ARCHITECTS



Preparing for Sea Level Rise

Measures to
protect your home...

Replace old batt
insulation with spray
foam insulation.

Water/Air barrier & an
excellent insulator!



Preparing for Sea Level Rise

Measures to
protect your home...

Foundation Retrofit

Counteracts buoyancy
effects of rising tides

Helps keep home on
foundation during
earthquakes



Preparing for Sea Level Rise

Measures to
protect your home...

Raise mechanical
Equipment above BFE

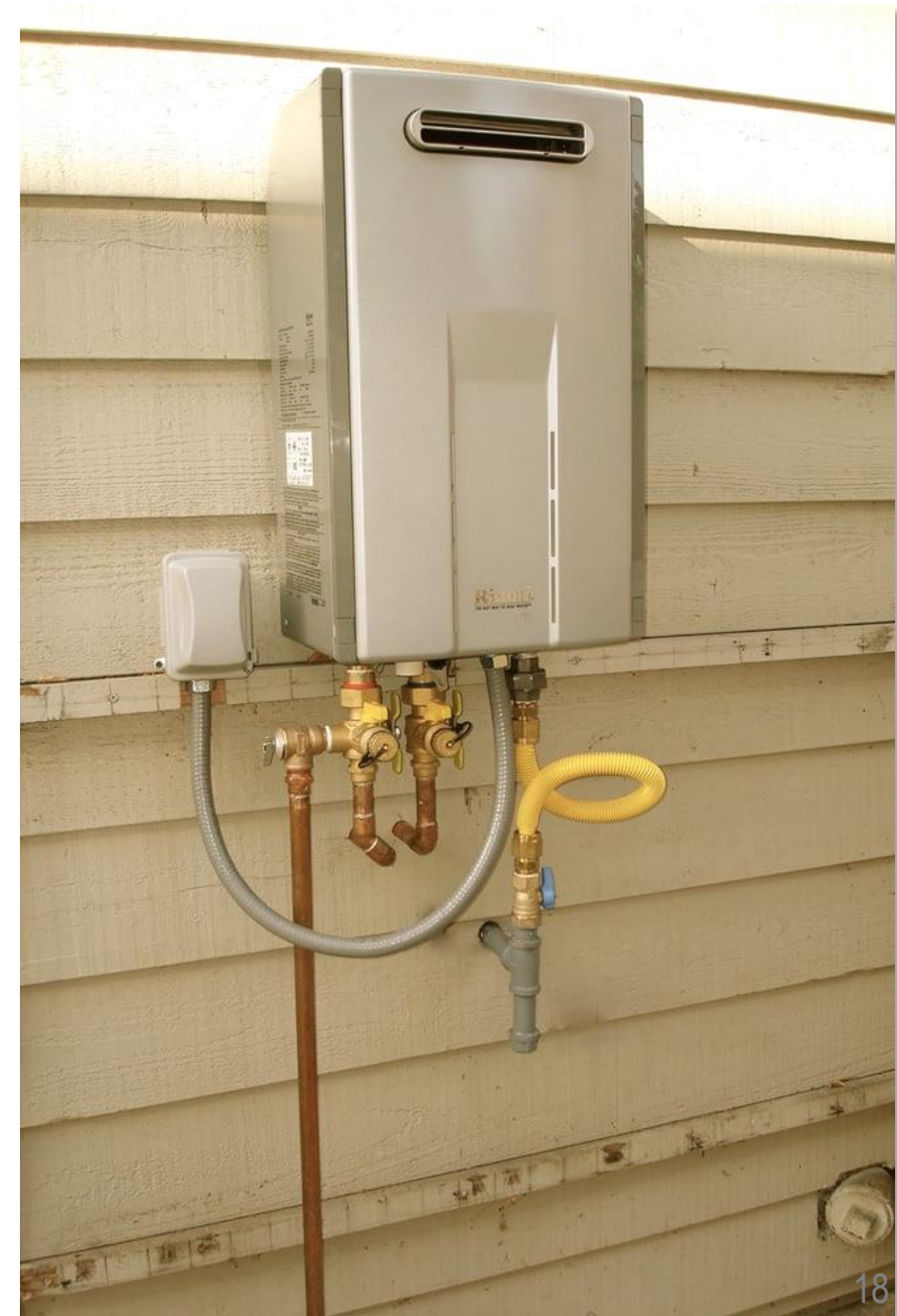
Anchor to home to keep
them from floating away



Preparing for Sea Level Rise

Measures to
protect your home...

Raise Water Heater or
Install a Tankless Water
Heater above the BFE

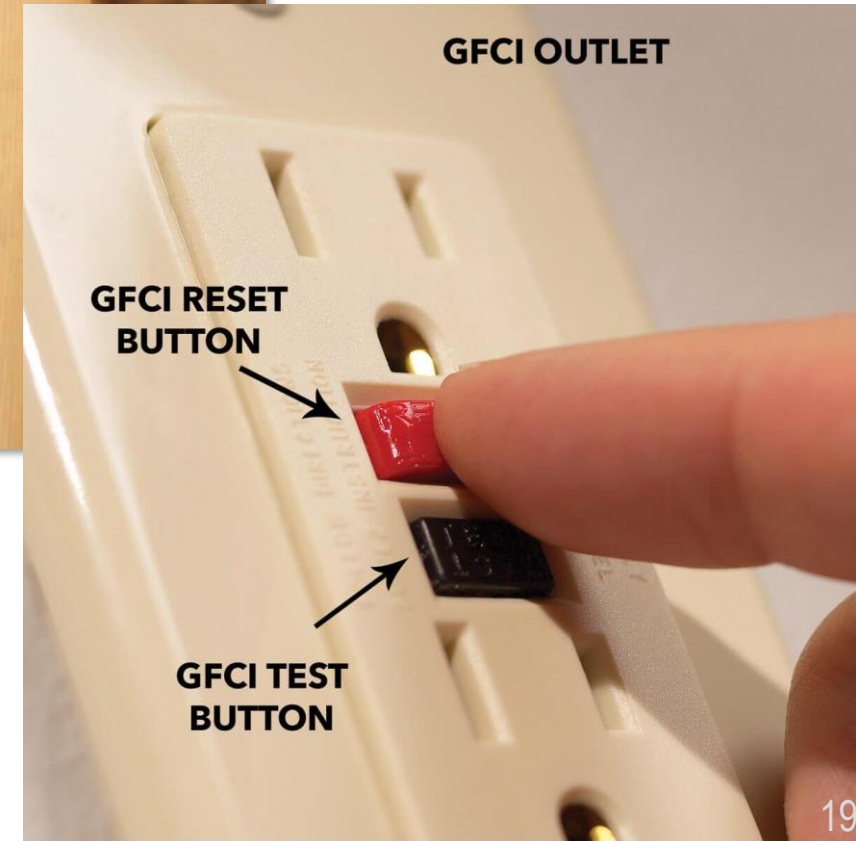


Preparing for Sea Level Rise

Measures to
protect your home...

Raise Electrical Outlets
above the BFE

Replace old outlets with
Ground Fault Circuit
Interrupt (GFCI) outlets



Preparing for Sea Level Rise

Measures to
protect your home...

Keep drainage systems
free and clear of debris

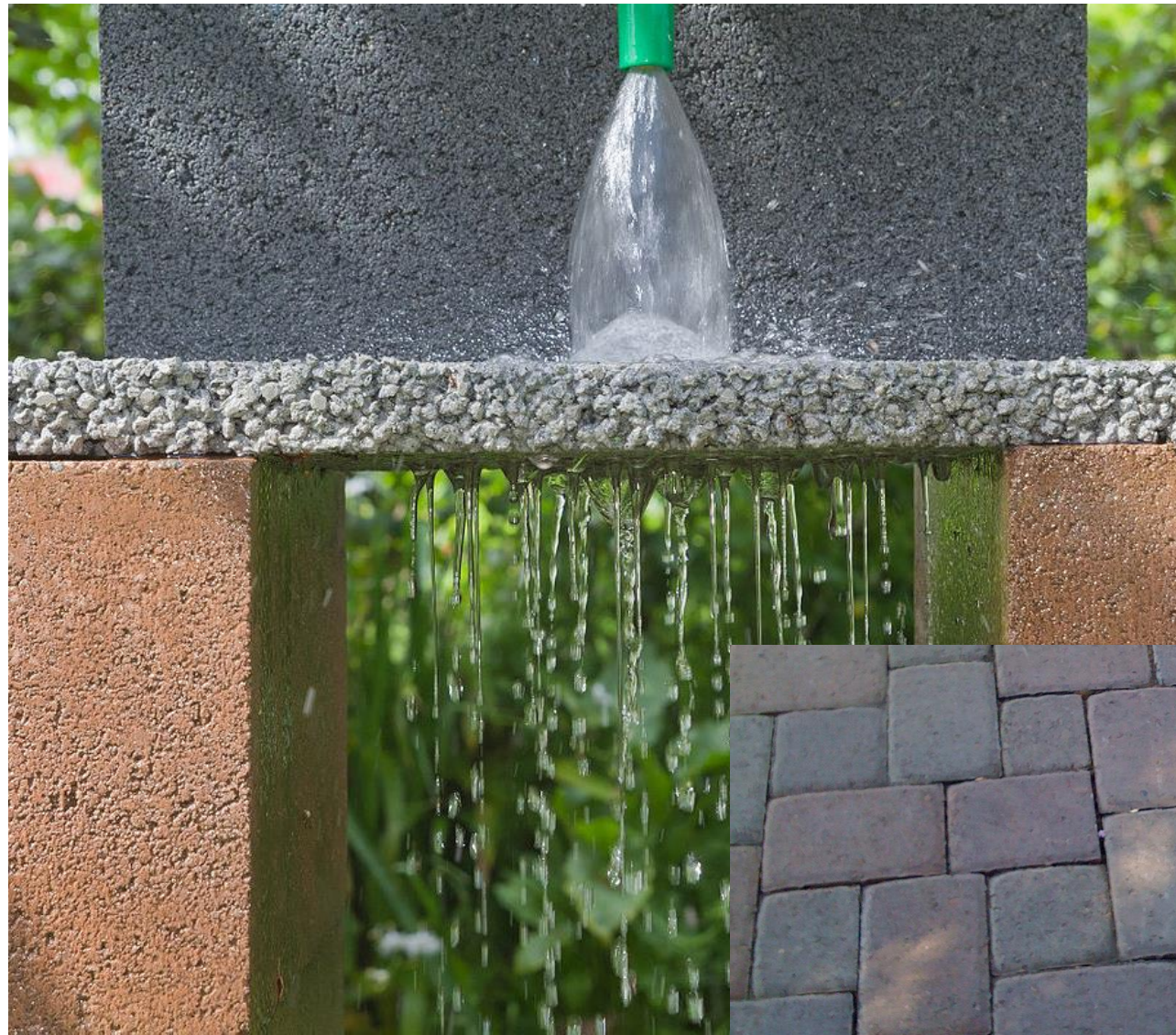
Slope outside dirt away
from exterior walls



Preparing for Sea Level Rise

Measures to
protect your home...

Permeable Concrete and
Pavers allow water to
soak back into the
ground

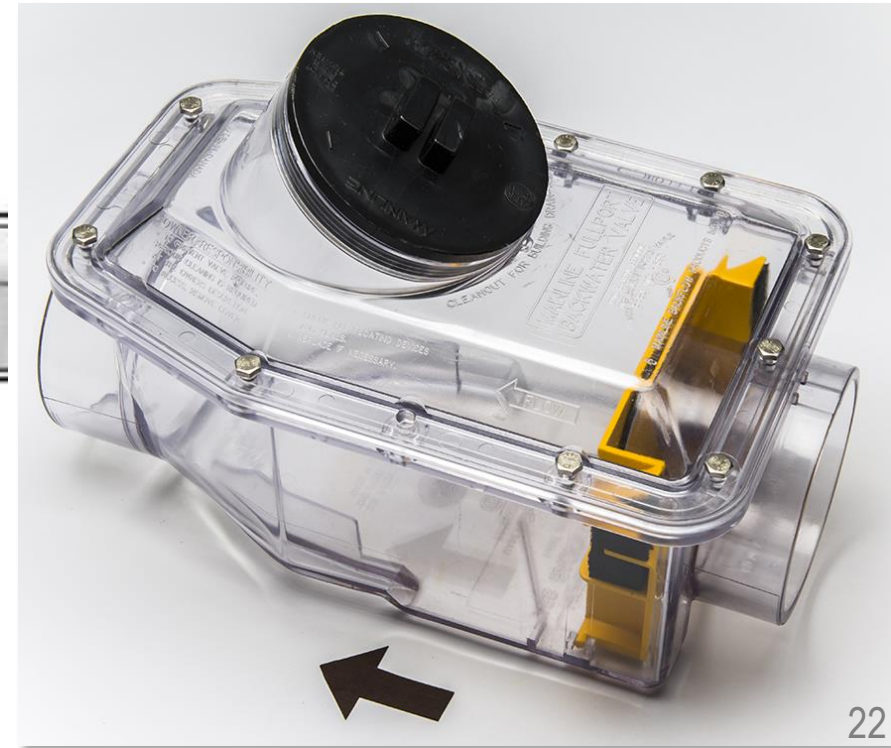
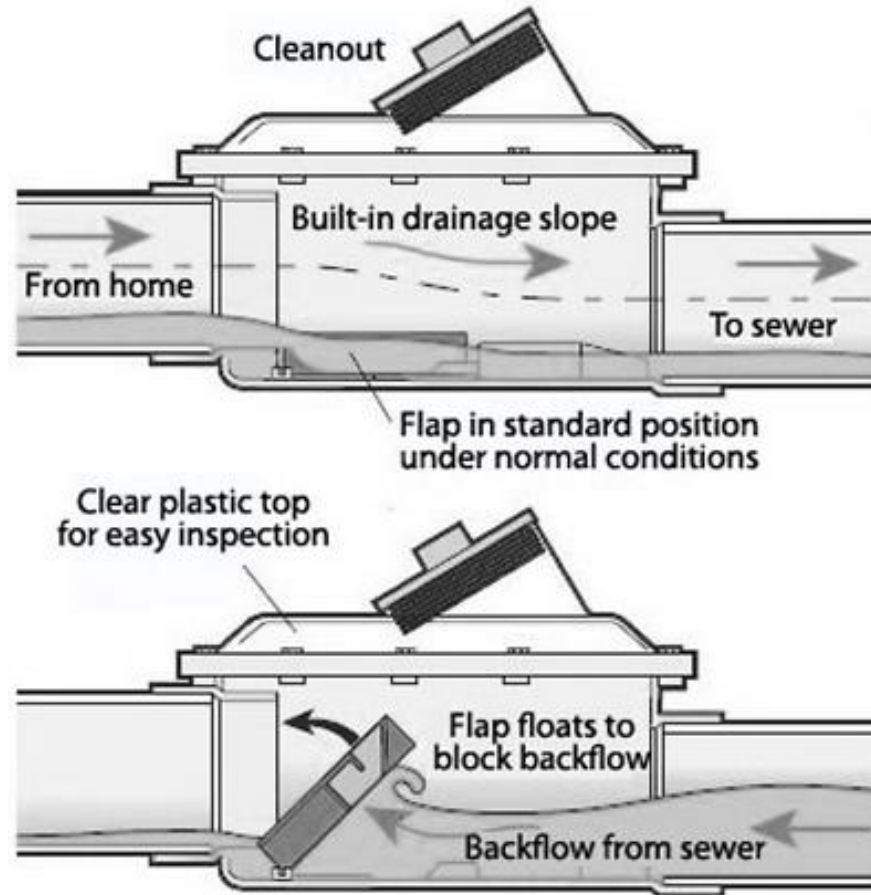


Preparing for Sea Level Rise

Measures to
protect your home...

Mainline Sewer Backflow
Preventers protect from
city sewer line backups

...eeeww!



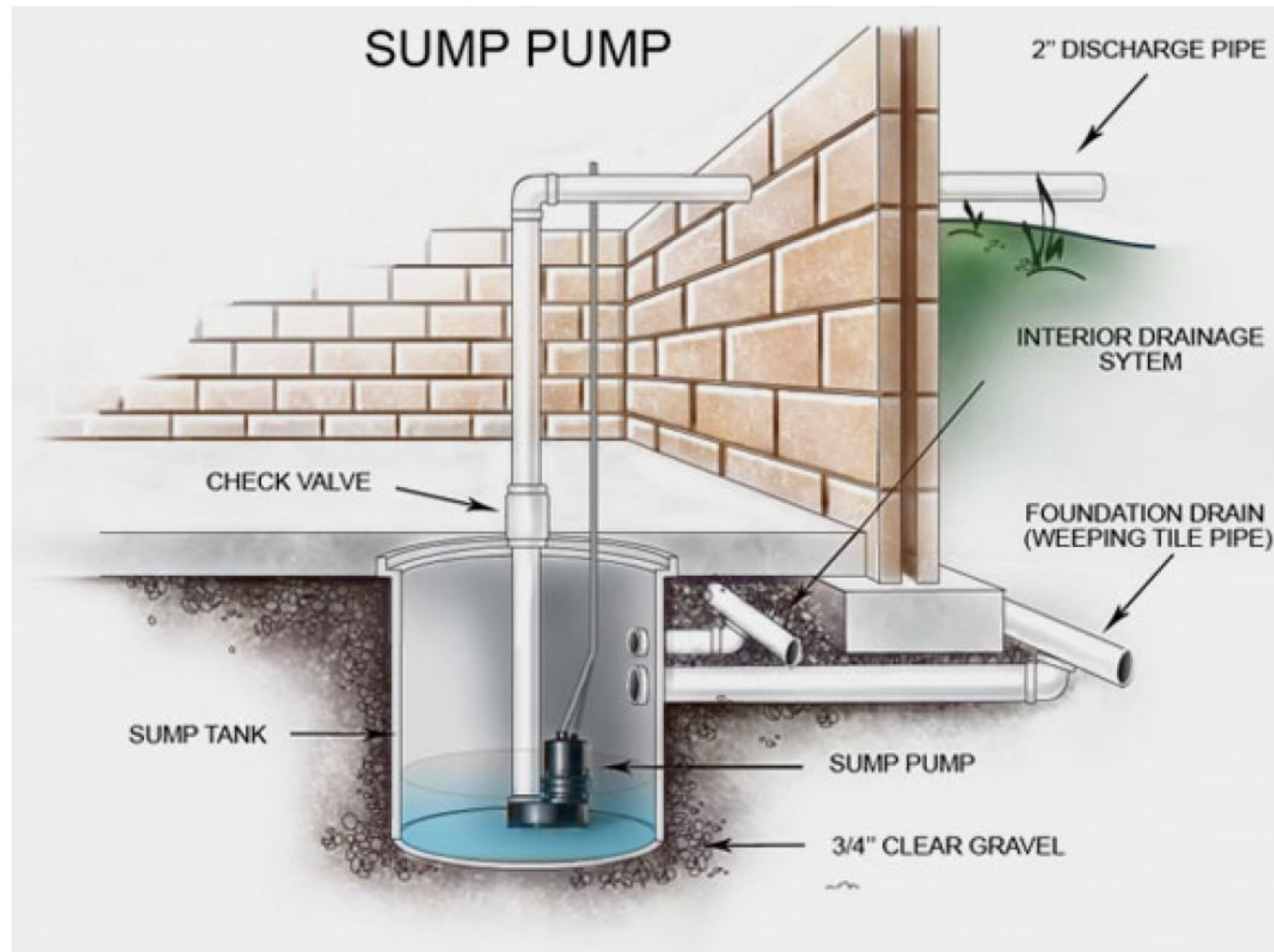
Preparing for Sea Level Rise

Measures to
protect your home...

Install a sump pump in
basement areas.

Discharge pipe should
be above BFE

Use portable sumps for
clearing water elsewhere



Preparing for Sea Level Rise

Measures to
protect your home...

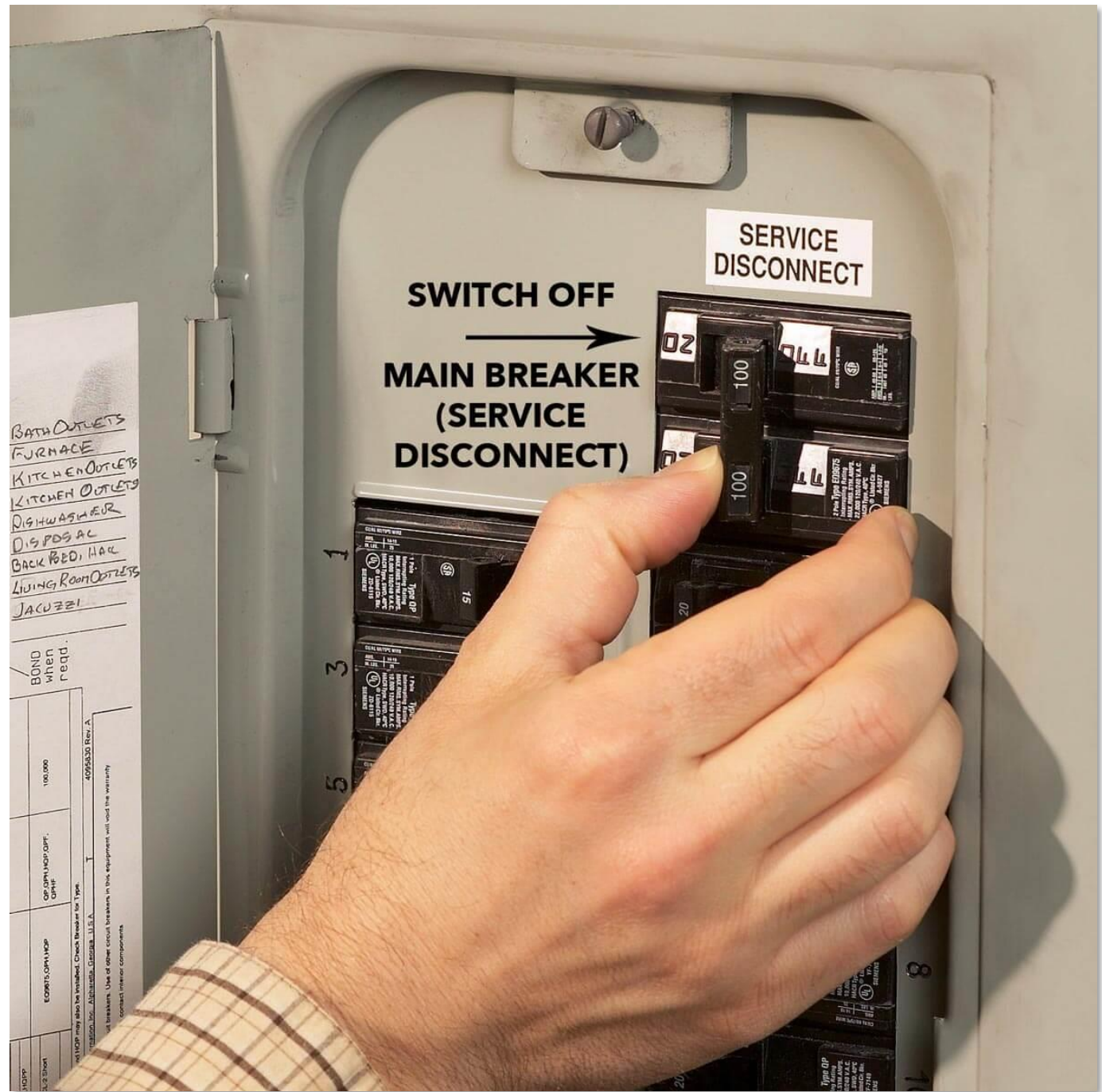
Keep garage contents
off the ground



Preparing for Sea Level Rise

Measures to
protect your home...

Turn off power at your
main breaker panel,
gas and water meters



Preparing for Sea Level Rise

Measures to
protect your home...

Expandable flood gates
& sandbags can help



Preparing for Sea Level Rise

Let's keep
our homes
above **water!**



jeannette
ARCHITECTS

Resources

www.FEMA.gov

www.SmartVent.com

Search online “home floodproofing”
Jeannette Architects @ 562.987.9139